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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
	)	
Deployment of Wireline Services Offering	)	CC Docket No. 98-147
Advanced Telecommunications Capability	)	
	)	
Further Notice of Proposed Rulemaking	)	

COMMENTS OF BELL ATLANTIC

Michael E. Glover
Of Counsel

Donna M. Epps
1320 North Court House Road
8th Floor
Arlington, VA 22201
(703) 974-2815

Attorney for the Bell Atlantic
telephone companies

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I. Introduction and Summary

The Commission should reject proposals to impose a new "line sharing" requirement on incumbent local exchange providers alone among the many emerging providers of broadband services.

As an initial matter, imposing a line sharing requirement would promote the interests of individual *competitors* at the cost of deterring the development of *competition* for basic local telephone services to the mass market, and would risk freezing or significantly slowing the rate of technological innovation. By doing so, such a requirement would be directly contrary to the objectives of the 1996 Act and would elevate the interests of competing carriers above those of the consuming public.

Moreover, a line sharing requirement is both wholly unnecessary and unlawful. As the Commission itself has recognized, competing providers of broadband services *already* can enter the market and compete on the same basis as the incumbents -- namely,

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[1] The Bell Atlantic companies ("Bell Atlantic") are Bell Atlantic-Delaware, Inc.; Bell Atlantic-Maryland, Inc.; Bell Atlantic-New Jersey, Inc.; Bell Atlantic-Pennsylvania, Inc.; Bell Atlantic-Virginia, Inc.; Bell Atlantic-Washington, D.C., Inc.; Bell Atlantic-West Virginia, Inc.; New York Telephone Company; and New England Telephone and Telegraph Company.

by purchasing an unbundled loop and providing a full range of services over that loop. Under these circumstances, providing access to only part of the spectrum on a loop simply cannot be squared either with the definition of a "network element" or with the unbundling standards in the Act.

With respect to spectrum compatibility and spectrum management issues, the Commission correctly proposes to rely on the industry standards currently under development by Committee T1 which have been the subject of extensive testing by industry experts and are the product of a consensus of all sectors of the telecommunications industry. In the interim, until these new standards are released later this year, the Commission should continue to require all new technologies to comply with the existing T1 standards including T1.601, T1.413 and Telcordia's technical advisory TA1210. It should not impose its interim "one size fits all" rule which presumes that a new technology is acceptable for deployment on all networks nationwide simply because it appears not to degrade service on a single network, no matter what differences may exist between those various networks.

II. Line Sharing Would Deter The Development of Competition and is Contrary to The Public Interest.

The Commission should reject proposals to impose a mandatory line sharing requirement. Such a requirement is both bad public policy and unnecessary.

First, line sharing would deter the development of *competition* for local voice services to the mass market, while serving only to promote the interests of individual *competitors*. Today, local exchange carriers typically are required to provide basic local telephone service at rates that are often at or below the cost of providing the service.

Under these circumstances, competing carriers will have no incentive to provide less compensatory local voice services if they can have access to more economically remunerative advanced services by hitching a "free ride" on top of incumbent carriers' voice service. As a result, line sharing would not only deny the incumbent the ability to recover the full cost of the line by selling a package of services to the customer, but it would affirmatively deter other carriers from providing competing voice services. As Dr. Alfred E. Kahn has explained, "[s]uch a mandatory spectrum sharing [requirement] would have the additional, distressing consequence that it would eliminate any incentive on the part of competitive carriers to provide voice services as part of a total package." *See Reply Declaration of Alfred E. Kahn,* CC. Docket. 96-98, at ¶ 19 (filed June 10, 1999) ("*Kahn Decl.*") (attached). Dr. Robert W. Crandall echoes this assessment in his accompanying affidavit:

> The effect of a line-sharing unbundling requirement is also to reduce the incentive for CLECs to develop a complete package of services, including basic voice service. A major purpose of the 1996 Act and of its unbundling provisions is to stimulate competition in basic telecommunications services, but extending the unbundling concept to line sharing will only reduce the incentive of CLECs to compete in the market for basic voice services.

Declaration of Robert Crandall at ¶ 14. ("*Crandall Decl.*") (attached). [2]

[2] Dr. Crandall goes on to note that the reason a CLEC wishes to avoid providing voice services, once it has access to a subscriber and is offering the subscriber a complementary data service, is "that the provision of the voice service, undertaken by the ILEC as part of its carrier-of-last-resort responsibilities, is not economically remunerative to the CLEC." Therefore, "the Commission's desire to remove a hypothetical CLEC cost disadvantage through line sharing amounts to a policy to saddle the ILEC with a limited [voice] service whose regulated retail rate is often insufficient to cover the service's costs." *Crandall Decl.* at ¶¶ 18, 19.

Second, line sharing would actually delay the deployment of advanced services because it would discourage both incumbent and competing carriers from investing in new network facilities necessary for the deployment of these services. Just as line sharing will deter competing carriers from providing voice service over existing loops, it would also undermine competing carriers' incentive to deploy their own wireline or wireless facilities. Again, if competing carriers can obtain access to the higher frequency portions of the local loop at little or no charge, they will have little incentive to build their own competing local exchange facilities. In fact, a competing carrier may believe that a different network design or technology is better than one that uses a shared loop, but nevertheless decide to lease a share of the incumbent's line at a TELRIC rate rather than risk investment in new facilities. *Crandall Decl.* at ¶ 12.

Line sharing would similarly deter incumbents from making investments in advanced services because they will have a limited ability to defray the fixed outlays required for the new advanced services. As Dr. Crandall explains:

> [A]s long as the ILEC knows that it must lease its facilities at TELRIC rates, its incentive to invest in network upgrades required for DSL technology is severely attenuated . . . . ILEC's incentives to invest in the requisite central-office facilities, line conditioning, and fixed marketing and distribution expenses are also reduced since the profitability of such a service is surely a function of its ability to offer DSL over the same lines as those used for current voice-grade services. If it is forced to share these lines at TELRIC rates, it has much less incentive to invest in the facilities required to deliver advanced services.

Crandall Decl. at ¶ 13. Consequently, the net result of line sharing will be fewer investments in basic voice and advanced services and less overall facilities-based competition.

Third, line sharing would risk further stifling, or at a minimum significantly slowing, service innovation in the public telephone network. Anytime an incumbent

wants to upgrade or modernize its networks to provide consumers with innovative services, it will be faced with claims that those upgrades adversely affect competing carriers sharing the line. For example, an incumbent who wants to replace copper loops with fiber, likely will be met with howls of resistance from competing carriers whose services rely on the *old* network. Incumbents will then be put to the Hobson's choice of either foregoing important networks innovations incurring the cost of operating and maintaining duplicate network facilities or being subjected to possible regulatory sanctions -- all because they simply want to update their network and provide improved service. Dr. Crandall confirms this result by explaining that:

> Any decision by an ILEC to modify its network to provide new or better services or to deliver them more efficiently is likely to have an impact on CLECs leasing pieces of its network. These CLECs will surely have every incentive to complain to regulators that network changes are designed to disadvantage them (the CLECs) and thereby to block or delay their rivals' attempts to develop more attractive services. If every innovation in network design must first be scrutinized by rival CLECs who are lessees of network elements, particularly those *sharing* their lines, surely the pace of innovation will slow substantially.

Crandall Decl. at ¶ 15; *see also Statement of Dr. Charles L. Jackson* at ¶ 13.

Fourth, line sharing is wholly unnecessary and there is simply no need for the public to endure the adverse effects it would have on competition and innovation. Competing carriers do not need to share incumbents' lines to enter the advanced services market. They are already free to offer advanced services over unbundled loops. And like incumbents they are free to recover their costs for that unbundled loop through the provision of voice as well as data services. Additionally, requiring competing carriers to enter the advanced services market using unbundled loops will increase their incentive to deploy local exchange services to the mass market. As Dr. Kahn has explained, this is the only result that will promote economically efficient competition:

> Manifestly, fair and efficient competition requires that CLECs and ILECs both be required to bear the full incremental costs of these multi-purpose facilities, the loops -- whether by investing in them themselves or acquiring them, unbundled, from the incumbents -- competing, then, on equal footing in providing whatever portions they choose of the entire range of services whose supply the loops make possible.

Kahn Decl. at ¶ 21.

Indeed, the Commission itself previously has reached the same conclusion. In the course of rejecting claims that competing carriers are caught in a "price squeeze" when they try to offer only data services over a loop, the Commission explained:

> It is not clear that fear of a price squeeze is well-founded. Northpoint's argument is premised on its assertion that GTE's rate for its ADSL service 'is less than the price it charges competitive LECs for the loops, collocation and transport necessary to provide DSL service,' but this is not an apt comparison. When a requesting carrier purchases these unbundled network elements, the facilities in question are capable of supporting a variety of services in addition to ADSL, such as local exchange service and access services. *Competitors need not recover their costs from ADSL service alone; they have the same opportunity as GTE to recover the costs of network elements from all of the services they offer using those facilities.* Thus, a carrier choosing to offer only data service over a facility that is capable of carrying more, such as GTE's ADSL offering, may not reap the entire revenue stream that the facility has to offer.

GTE Telephone Operating Cos. GTOC Tariff No. 1, GTOC Transmittal No. 1148, 13 FCC Rcd 22466 at ¶ 31 (1998) (emphasis added). Thus, line sharing is unnecessary because competing carriers can already compete in the advanced services market on the same terms as incumbents.

Fifth, the notion of imposing an onerous new line sharing requirement on incumbent local telephone companies alone among the many emerging competitive alternatives for advanced services is inconsistent with general economic principles. Unlike the traditional local exchange service market, incumbent local telephone companies do not enjoy a dominant position in the advanced services market. On the

contrary, if there is an incumbent in the advanced services market, it is cable companies, who serve some 80 percent of existing high-speed Internet access customers. And wireless services now being deployed provide still further competitive alternatives. Under these circumstances, as Dr. Crandall concludes, "[t]here is no reason for the Commission to handicap the ILECs with further unbundling requirements to facilitate competition in such a situation." *Crandall Decl.* at ¶ 4.

III. Line Sharing is Inconsistent With the Telecommunications Act.

In addition, imposing a line sharing requirement simply cannot be squared with the terms of the Act and would be unlawful.

First, mandating what amounts to unbundled access to part of the spectrum on a loop is inconsistent with the Act's definition of a "network element." The Act defines a "network element" as "a facility or equipment used in the provision of a telecommunications service" together with the "features, functions and capabilities that are provided by means of such facility or equipment." 47 U.S.C. § 153(29). Here, however, the "facility" is the loop, not part of the spectrum on the loop.

On this score, the Commission agrees. In implementing the Act's unbundling provisions, the Commission "adopt[ed] the concept of unbundled elements as physical facilities of the network, together with the features, functions, and capabilities associated with those facilities." *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* 11 FCC Rcd. 15499 at ¶258 (1996) ("*Local Competition Order*"). The Commission concluded "that the local loop element should be defined as a transmission facility between a distribution frame, or its equivalent, in an incumbent LEC central office, and the network interface device at the customer

premises." *Id.* at ¶ 380. And the Commission expressly found that "[f]or some elements, *especially the loop,* the requesting carrier will purchase exclusive access to the element for a specific period, such as on a monthly basis." *Id.* at ¶ 258 (emphasis supplied).

In contrast, the Commission specifically rejected the notion that carriers could purchase unbundled access to part of a loop to provide only some of the services requested by the customer.

> [C]arriers purchase rights to exclusive use of unbundled loop elements, and thus, . . . such carriers, as a practical matter, will have to provide whatever services are requested by the customers to whom those loops are dedicated. This means, for example, that, if there is a single loop dedicated to the premises of a particular customer and that customer requests both local and long distance service, then any interexchange carrier purchasing access to that customer's loop will have to offer both local and long distance services. That is, interexchange carriers purchasing unbundled loops will most often not be able to provide solely interexchange services over those loops.

Local Competition Order at ¶ 357.

And even more directly to the point, the Commission also rejected proposals for line sharing where one carrier provides a voice service while a second carrier provides a digital service.

> Some parties advocate defining a loop element as merely a functional piece of a shared facility, similar to capacity purchased on a shared transport trunk. . . . While such a definition, based on the types of traffic provided over a facility, may allow for the separation of costs for a facility dedicated to one end user, we conclude that such treatment is inappropriate. Giving competing providers exclusive control over network facilities dedicated to particular end users provides such carriers the maximum flexibility to offer new services to such end users. In contrast, a definition of a loop element that allows simultaneous access to the loop facility would preclude the provision of certain services in favor of others. For example, carriers wishing to provide solely voice-grade service over a loop would preclude another carrier's provision of a digital service, such as ISDN or ADSL, over that same loop. We note that these two types of services could be provided by different carriers over, for example, separate two-wire loop elements to the same end user.

Local Competition Order at ¶ 385.

Second, even if loop spectrum could be construed to fall within the statutory definition of "network element," which it can not, mandating unbundled access to only part of the loop simply cannot meet the unbundling standards in the Act. Specifically, Section 251(d)(2)(b) requires unbundling only where "the failure to provide access to such network elements would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer." The Supreme Court ruled that this Section requires the Commission to apply "some limiting standard, rationally related to the goals of the Act." *See AT&T v. Iowa Utils. Bd.,* 119 S.Ct. 721, 734 (1999). For example, to comply with the Court's ruling, the Commission must consider "the availability of elements outside the incumbent's network," and may not indulge in an "assumption that any increase in cost (or decrease in quality) imposed by denial of a network element" requires unbundling. *Id.* at 735. Likewise, just as the Commission must consider alternatives outside the incumbent's network, it logically follows that it must consider alternatives inside the incumbent's network. In this case, competing carriers already have -- and are using -- precisely such an alternative to line sharing for offering advanced services. This alternative is the same one that is available to incumbents -- namely, use of the whole loop.[3]

[3] States also lack authority under the Act to mandate line sharing. Under Section 251(d)(3), states may impose access and interconnection obligations on incumbents only to the extent that they are "consistent with the requirements of this section." 47 U.S.C. § 251(d)(3). But as explained above, imposing a line sharing requirement is inconsistent with the unbundling standards in the Act.

IV. Line Sharing Would Result in Technical and Operational Difficulties Detrimental to the Public.

Although line sharing may not be technically impossible, it would cause significant technical and operational difficulties that would decrease the overall quality of service received by the public. In addition to potentially displacing valuable services already deployed on the high frequencies of many loops, line sharing would make routine testing and repair infinitely more complex and time consuming. End users would be forced to endure extended delays for the resolution of their service complaints as carriers engage in virtual guess work to determine what aspect of which carrier's service is responsible for a given problem or trouble.

The Commission incorrectly assumes that xDSL services are the only services that might use the higher frequencies on a loop. They are not. In fact, carriers are offering services today that operate above the spectrum typically associated with voice communications. Thus, it is impossible to provide line sharing to competing carriers on a percentage of local loops because conflicting services already occupy the higher frequency bands on many lines.

While xDSL service is one recent example of a service using higher frequencies on a loop, it is by no means the only such service. Carriers today offer many services that utilize higher frequencies on a loop. The following are just a few illustrations of such services:

> Data-Over-Voice: Since the 1980s, Bell Atlantic has offered services (such as CO-LAN service associated with Centrex) that transmit data over the customer's voice loops. This service uses spectrum in the 80-114 kHz range. It is currently in use on more than 15,000 customer lines.
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> Integrated Services Digital Network: Bell Atlantic currently offers customers the ability to establish separate channels for data and voice on a single line. ISDN

service can be used by residential and business customers in lieu of plain old telephone service ("POTs"). This service uses spectrum in the 40 kHz range. It is currently in use on more than 424,000 customer lines.

Electronic Business Sets: Bell Atlantic currently offers services that enable customers to use electronic premises equipment to activate special features, such as conferencing and messaging. This service uses spectrum in the 8 KHz range. It is currently in use on more than 100,000 customer lines.

Giving carriers access to unbundled spectrum on loops would inevitably cause interruptions to the services on the line that already use that portion of the spectrum. In fact, if a competing carrier were given access to unbundled spectrum on a line with ISDN service, the customer would no longer be able to make or receive any voice or data calls.

Carriers are also using the upper frequency ranges on the loop to create additional voice channels. For example, Bell Atlantic currently uses a separate channel on loops to derive additional capacity to provide voice services to the customer, or to another nearby customer, rather than building more loops. This capability, called Digital Added Main Lines, uses spectrum in the 40 kHz range. Requiring an incumbent carrier to "unbundle" the higher frequency spectrum on its loops for use by another carrier would inhibit the incumbent carrier's ability to make efficient use of its loops in this manner.

Additionally, line sharing would create a number of maintenance and repair complexities because each carrier would need to perform trouble isolation and testing without disrupting the other carrier's POTs or data service. Today, when a customer subscribing to both POTs and xDSL experiences a service problem, a carrier responding to a trouble report must isolate and test each service because it is often unclear whether the voice or data service is the root cause of the problem. Typically, the carrier can perform a routine metallic loop test on its POTs service by turning off its ADSL service

at the DSLAM. Similarly, the carrier tests its ADSL service through centralized testing of its DSLAM.

However, the presence of multiple carriers in a line sharing context would make such troubleshooting and testing infinitely more complex because neither carrier will have the sole ability to isolate and remotely test its service. For example, without access to the ADSL carrier's DSLAM, Bell Atlantic will be unable to turn off the other carrier's ADSL service to enable Bell Atlantic to perform the requisite metallic loop test of its POTs service. Instead, with line sharing, carriers using the same loop will have to coordinate with one another every time there is a problem on the line because it will be unclear whether data problems are caused by telephone customer premises equipment or POTs problems are caused by data, customer premises equipment or inside wiring. Ironically, this is the type of dual carrier coordination that competing carriers are currently arguing impedes their ability to compete. As Dr. Charles L. Jackson explains in his accompanying affadavit:

> [T]he operation by CLECs of DSL systems on ILEC loops providing ILEC voice services will create some significant operational problems, particularly in the areas of testing and repair. One firm could change its network (for example, by installing a new transmission system) that intermittently degraded the performance of another firm's DSL system or voice service. Identifying the new failure mode might require cross-firm testing (*e.g.*, turning off the new system before running tests). Coordinating such testing will be more difficult and expensive than coordinating testing inside a single firm. Diagnosis and testing of a service with problems will require actions outside the capabilities of any single firm. For example, the ILEC voice service provider may wish to make measurements on the line or observations of equipment behavior in absence of the ADSL signal. One way to remove that signal is for the ILEC technician to call the CLEC ADSL service provider and request that the ADSL signal be removed. Such a call requires that the CLEC have in place a technician capable of responding to the call, which may or may not be the case.

Statement of Dr. Charles L. Jackson at ¶ 10 (attached).

Additionally, with the introduction of splitterless ADSL, trouble reports will no doubt increase. Instead of using a splitter, splitterless ADSL uses a filter placed by the end user on his or her telephone. If the filter is omitted or installed improperly on the telephone, the end user will experience interference between his or her voice and data services. In a line sharing context, the difficulty will be determining which service is responsible for the interference, and which carrier is required to correct the problem. Because incumbent carriers' maintenance responsibilities generally stop at the network interface device, absent additional coordination, improperly placed filters, in the splitterless ADSL context, will result in additional opportunities for "finger pointing."

The ultimate loser in this chaotic scenario would be the customer. When one carrier is responsible for all services on a line, the customer is more likely to have his or her problem resolved by the first repair visit. However, with line sharing, customers would have to suffer the frustration of having multiple carriers make numerous repair visits without any real guarantee that the service problem is capable of resolution by any one carrier. Customers will be equally frustrated by the inevitable finger pointing that carriers will engage in as each claims that it is the other's service that is the culprit for any interference or other service problems. Thus, maintenance and repair of shared lines will become a triangular circus of unnecessary activity between at least two carriers. Unfortunately, it will be the customer who will experience the brunt of the negative effects of any unnecessary regulatory mandate to line share.

V. The Commission Should Rely On Standards Developed by Committee T1 to Set Long-Term Policies for Spectrum Management and Spectrum Compatibility.

The Commission correctly proposes to rely on the spectrum compatibility and spectrum management standards currently under development by Committee T1. *See Further Notice* at ¶ 81. The Commission should direct Committee T1 to continue its work on the new standards because Committee T1 is the best forum to investigate the actual level of interference between technologies and to determine which new technologies are acceptable for deployment and under what circumstances. Working Group T1E1.4, under the auspices of Committee T1 subcommittee T1E1, addresses digital subscriber line access issues. With some of the industry's leading technical experts submitting technical contributions to facilitate the standards making process, T1E1.4 has the requisite experience and expertise to tackle the issues of spectrum compatibility and management. The Commission has already acknowledged T1E1.4's suitability by requesting earlier this year that it undertake the development of new spectrum compatibility and management standards.[4] The new standards will include signal power limits, technology deployment restrictions, and loop assignment guidelines for certain digital subscriber line spectrum management classes. The standards will also provide a generic analytical method to determine spectral compatibility.[5] Work on these new standards is well underway. Draft standards are expected to be sent out by letter

[4] *See* FCC Letter from Stagg Newman, Chief FCC Technologist to Terry Yake, Chairman of the Alliance for Telecommunications Industry Solutions Board.

[5] *See* Working Draft of T1E1.4 Spectrum Management Standard.

ballot for a vote of the full Committee T1 later this month, and it is likely that the new standards will be completed by year end.

The Commission's concern regarding the alleged domination of Committee T1 by incumbent carriers is unfounded. Incumbent carriers dominate neither Committee T1 membership nor its decision-making process. Instead, all segments of the telecommunications industry are free to participate in Committee T1's competitively neutral standards setting process. Membership and participation in Committee T1 as well as the T1E1.4 Working Group is open to all parties with a direct and material interest in Committee T1 activities. Thus, any and all entities with a material interest in the standards setting process, *including members of the advanced services industry*, have an opportunity to attend meetings and vote on new standards at their discretion.[6]

Entities from all segments of the industry have seized this opportunity. Committee T1 membership is dispersed among exchange carriers, interexchange carriers, manufacturers and user/general interest groups.[7] Contrary to claims of incumbent carrier domination, incumbent carriers constitute *less than 10 percent* of the organization's 80 voting members which include six incumbent carriers and at least five competitive local exchange carriers, excluding wireless providers.[8] Moreover, to maintain its American

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[6] Additionally, T1's membership dues of $4,300 are among the lowest of all industry groups, and do not serve as a barrier to annual membership for small competitive carriers.

[7] The specific breakdown of T1 Committee voting members, per the May 27, 1999 Committee T1 Membership Roster, includes 12 local exchange carriers, 7 interexchange carriers, 43 manufacturers and 18 user/general interest entities.

[8] *See* May 27, 1999 Committee T1 Membership Roster. Committee T1 membership is relevant because T1E1.4 may only develop recommendations for new standards. Approval of such standards requires a vote of the full Committee T1.

National Standards Institute accreditation as a standards developer, Committee T1 must follow its policy of balanced participation and must meet certain requirements to prevent any single interest group from dominating the standards development process. For example, two-thirds of the members voting must approve all new standards. However, if a particular interest group constitutes a majority of the membership, votes are weighted so that the total possible votes of that interest group do not constitute a majority. Thus, because all interested parties have an equal opportunity to be heard in the Committee T1 standards-making process, the new spectral compatibility standards, once completed, will reflect a fair, well-reasoned industry consensus.

The Commission should require all new technologies to be consistent with the new Committee T1 standards (once released) prior to deployment. Such a requirement will establish a clear benchmark for carriers to use in evaluating the acceptability of new technologies as well as provide a strong incentive for all industry segments to join and actively participate in Committee T1.

In stark contrast to the inherent public benefits of relying on the well-researched new Committee T1 standards to evaluate new technologies, the Commission's interim "one size fits all" presumption will put quality service to end users at risk. The Commission concluded in its *First Report and Order* that, as an interim matter, a new technology should be presumed acceptable for deployment if it had either been successfully deployed on any other network or had been approved by a state commission. That conclusion is misplaced.

First, the Commission's presumption rests on the erroneous premise that the service environment in which a new technology is deployed on one network will

necessarily mirror the potential service environments on all other networks. Networks nation-wide are not homogenous. The successful deployment of a new technology on network A does not address the scope of services deployed on network B. The key issue in determining whether a new technology can coexist with and not degrade existing services depends on the identity and combination of the actual services that are deployed in the same binder group with that new technology. There are countless service combinations present on networks throughout the country. The fact that a single application of a new technology does not degrade service in one binder group that traverses one portion of a single network does not mean that that same new technology will not degrade the existing service combinations present in different binder groups on a different network. Rather, the apparently successful deployment could merely mean that in that network there are no potentially interfering services contained in the same binder group with the new technology. Similarly, the successful introduction of a new technology on a small scale in a rural network is not indicative of its interference potential when it is deployed on a much larger scale on a network in a densely-populated urban area.

Second, the Commission's presumption will guarantee that the public necessarily will suffer service degradation *before* an incumbent carrier can prove a new technology's interference capabilities. This is true because, absent compliance with industry standards or appropriate testing by a neutral third party, it is virtually impossible to ascertain a new technology's propensity to degrade service *prior* to deployment. As a result, an incumbent will know a particular technology can cause interference only *after* it has been deployed and actually interferes with other services. In effect, the interim presumption

converts the public network to a laboratory to test the limits of new technologies and will force the public to endure a degradation of service before an incumbent can obtain the evidence it needs to successfully rebut the Commission's presumption and prove the new technology causes interference.

Instead, for the brief period remaining before the new Committee T1 standards are released later this year, the Commission should adopt a new presumption that all new technologies that comply with the existing Committee T1 standards, including T1.601 (ISDN part), T1.413 (non-overlapped mode) and Telcordia's technical advisory TA1210 are presumed not to cause interference.[9] Conversely, any carriers that want to deploy new technologies that do not comply with any of the foregoing standards should bear the responsibility of demonstrating that they will not significantly degrade existing services.

To the extent carrier disputes arise over the acceptability of a new technology for deployment, during or after this interim period, the Commission should require carriers to mutually agree upon and fund an independent third party laboratory, such as Telcordia, or some other independent body to conduct the appropriate tests and resolve such disputes. If, however, the Commission requires all new technologies to be consistent with Committee T1 standards, carrier disputes over interference caused by a new technology should be rare.

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[9] The Commission refers to TR-28 as an appropriate standard. However, this standard is inappropriate because it does not contain the power density spectrum masks necessary to evaluate HDSL.

VI. The Commission's Proposals For Binder Group Administration Are Unnecessary Because the New Committee T1 Standards Will Largely Eliminate the Need to Actively Manage Binder Groups.

The Commission seeks comment on the development of xDSL binder group administration practices, including practices to specify the types and numbers of technologies that can be deployed in a particular binder group. *See Further Notice* at ¶ 86. In seeking comment on these issues, the Commission incorrectly assumes that every binder group must be actively managed to facilitate the deployment of new technologies. However, such binder group micro-management is unnecessary in light of the spectrum compatibility standards under development by Committee T1.

Spectrum management is the administration of the loop plant in a way that provides spectral compatibility for services and technologies that use pairs in the same cable. The new Committee T1 standards' reliance on standardized analytical methods for determining spectral compatibility will eliminate the need for proactive spectrum management through uniform binder group administration practices. This is so because the new standards will be based on a "worst case" approach that assumes, before approving a new technology, that a binder group will contain the maximum number of potentially interfering technologies. The benefit of this approach is that when evaluating the deployment of a new technology, carriers will not have to implement extensive binder group administration practices to consider the specific mix of technologies within a particular binder group.

In other words, because the power spectral density masks contained in the new Committee T1 standards will ensure that a new technology can coexist with other services, if a new technology complies with the Committee T1 standards, carriers will

know they can successfully introduce it into a cable without identifying the exact nature of the services contained in every binder group. Consequently, it is unnecessary for incumbent carriers or the Commission to develop binder group administration practices that specify the type and numbers of acceptable technologies that can be deployed in any particular binder group.

Additionally, it is unnecessary for the Commission to solicit the assistance of a third party to develop loop spectrum management policy similar to the role served by the administrator for number portability. The Commission suggests that such a third party might develop binder group management procedures, facilitate the development of future power spectral density masks and resolve disputes between carriers over the existence of interference in shared facilities. *See Further Notice* at ¶ 90. However, none of these functions requires a third party administrator. As previously discussed, the new Committee T1 standards will eliminate the need for extensive binder group administration procedures. Any future technical specifications for power spectral density masks should continue to be handled by Committee T1 not a third party administrator, which lacks a mechanism for industry-wide input. Additionally, as previously discussed, carrier disputes should be resolved by a mutually agreed upon third party chosen by the carriers. Thus, other parties can more effectively fulfill all of the roles that the Commission envisions for a third party administrator.

VII. The Commission's Requirement for Incumbent Carriers to Provide Competing Carriers With Information Regarding the Contents of Particular Binder Groups is Unnecessary.

The Commission's requirement that incumbent carriers, upon their rejection of a carrier request to deploy new technology, disclose information about the number of loops

using advanced services technology in a binder group is unreasonably burdensome and unnecessary. *See Further Notice* at ¶ 73.

This proposed requirement is based on the erroneous assumption that services are assigned to a specific cable pair that occupies a single binder group from the central office to the customer demarcation point. This is not the case. Services assigned to specific pairs will typically traverse several different binder groups as cables are tapered and spliced throughout the network. It would be virtually impossible for incumbents to maintain an inventory of the number and identity of services for every binder group. Consequently, Bell Atlantic does not have any database or inventory mechanisms to track the assignment of services on a binder group by binder group basis throughout its network. The development of such a database would be a monumental and slow undertaking because it would require the conversion of thousands of manual cable plats as well as the unraveling of millions of maze-like paths followed by pairs through binder groups.

Moreover, the development of such a database to provide competing carriers with this information is unnecessary because, in general, the only reason Bell Atlantic would deny a carrier request to deploy advanced services on potential interference grounds would be the presence of alternate line inversion ("AMI") T1 signals in a binder group. AMI T1s represent a very small percentage of the technologies used in the Bell Atlantic network. In fact, Bell Atlantic has only disqualified 1 percent of all binder groups from deployment of xDSL due to the presence of AMI T1 technology. Because AMI T1 technology is the *only* reason a carrier's new technology request would be denied, it is both impractical and pointless to require incumbents to provide carriers with information

about specific technologies in specific binder groups and to undertake the colossal task of developing the requisite database to do so.

VIII. The Commission Should Refrain From Regulating the Removal of AMI T1 Technology.

The Commission questions whether it should require carriers to replace AMI T1 with new and less interfering technologies. *Further Notice* at ¶ 87. In an era of deregulation, the Commission should not further micromanage the network by dictating the time frame for the removal of specific technologies. Incumbent carriers are well aware of the interference between xDSL and AMI T1 and because AMI T1 is an older technology, incumbent carriers have an incentive to undertake its timely removal. Thus, since July 1998, Bell Atlantic's policy has been not to design new AMI T1 carrier spans.

Individual carriers, however, rather than the Commission, are in the best position to determine when and how AMI T1 or other older technologies should be phased out or retired. Additionally, AMI T1 does not pose a major threat to the deployment of advanced services. The Commission's proposal to replace *all* AMI T1s seems to assume that every binder group serving a customer must be AMI T1-free to provide that customer with xDSL services. This is not true. Most AMI T1s are used for business customers or large office buildings -- not residential customers. Unlike residential customers, an office building may have multiple binder groups and only two of those binder groups may contain the AMI T1 technology. This means there are other binder groups available to provide the business customer with xDSL service. Thus, the existence of AMI T1 in a cable will not exclude a carrier from providing most business customers with xDSL service. Although the distribution cable serving residential customers may well have an

insufficient number of binder groups to permit such separation, this very fact also precludes use of AMI T1s. Thus, they will not impede the deployment of xDSL services to residential customers.

XI. Conclusion

For all the foregoing reasons, the Commission should reject a line sharing requirement and take action with respect to spectrum compatibility and management issues consistent with the above.

Respectfully submitted,

By: Donna M. Epps

Michael E. Glover
Of Counsel

Donna M. Epps
1320 North Court House Road
8th Floor
Arlington, VA 22201
(703) 974-2815

Attorney for the Bell Atlantic
telephone companies

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